

a switch, for multiplexing each of a plurality of content streams provided by respective server modules to produce an output stream for transport via said communications channel;

said switch receiving non-content data from a data source and responsively multiplexing said non-content data into said output stream on a bandwidth availability basis.

12. The apparatus of claim 11, wherein said switch comprises a buffer for storing said non-content data, said apparatus further comprising:

a switch controller, for determining a bandwidth utilization level of said switch and responsively causing at least a portion of the contents of said buffer to be multiplexed into said output stream when said bandwidth utilization level falls below a threshold utilization bandwidth level.

13. The apparatus of claim 12, wherein said threshold bandwidth utilization level comprises a utilization level sufficient to process a single time extent, said content streams being divided into a plurality of respective time extents.

14. The apparatus of claim 12, wherein:

each of said content streams provided by said server modules to said switch is divided into a plurality of respective time extents; and

said switch is capable of multiplexing a predefined number of time extents into said output stream.

15. The apparatus of claim 14, wherein said bandwidth availability is determined by determining a maximum number of

extends capable of being multiplexed by said switch, determining an actual number of extents needed to be multiplexed by said switch, and defining a difference between said maximal and actual amount of extents to be multiplexed by said switch as an available bandwidth of said switch.

16. The apparatus of claim 15, wherein said non-content data within said buffer is multiplexed into said output stream in place of extents which are not provided by said server modules, said non-content data in said buffer being divided into extent size data portions.

17. The apparatus of claim 11, wherein said non-content data comprises control data and non-control data, said switch preferentially multiplexing said non-content control data over said content data.

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18. The apparatus of claim 11, wherein said non-content data comprises control data and non-control data, said switch preferentially multiplexing said non-content control data over said content data, said switch preferentially multiplexing said non-content control data over said non-content non-control data.

19. The apparatus of claim 17, wherein said non-content data comprises control data and non-control data, said switch preferentially multiplexing said non-content control data over said content data, said switch preferentially multiplexing said non-content control data over said non-content non-control data.

20. Apparatus, comprising:

a switch, for receiving content data streams from each of a plurality of server modules and multiplexing said content data streams to form an output stream, each of said content data streams comprising a plurality of extents, each of said extents defining a respective content portion;

a format converter, for converting non-content data from a first format into a second format, said second format being compatible with a format of said content streams; and

a controller, for receiving said non-content data in said first format and for causing said switch to insert corresponding non-content data of said second format into said output stream.

21. The apparatus of claim 20, wherein said switch comprises a data buffer for storing said non-content data of said second format.

22. The apparatus of claim 20, wherein said non-content data comprises at least one of control data and non-control data, said controller causing said switch to preferentially insert non-content control data into said output stream.

53/136/ 23. The apparatus of claim 20, wherein said first format comprises an internet protocol (IP) data format and said second format comprises an asynchronous serial interface (ASI) format.

24. The apparatus of claim 20, wherein said switch preferentially multiplexes content data into said output stream and inserts said corresponding non-content data into said output stream if excess bandwidth is available.

25. The apparatus of claim 21, wherein said switch communicates a buffer utilization level to said controller, said controller responsively causing said switch to adapt the amount of non-content data inserted into said output stream.

26. The apparatus of claim 22, wherein said preferential insertion is limited where failure to multiplex content data will result in the degradation of presentation quality of said content data.

27. The apparatus of claim 20, wherein said switch utilizes statistical multiplexing of received packets to predict bandwidth availability.

28. The apparatus of claim 27 wherein said predicted bandwidth availability is used to adapt a priority assigned to said non-content data to be inserted into said output stream.

29. A method, comprising:

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multiplexing a plurality of content stream portions to produce an output stream, said output stream being adapted to a forward application transport channel;

transmitting said output stream via said FATC;

determining if said FATC has associated with it a bandwidth utilization level below a threshold level; and

inserting, into said output stream, non-content data in response to available FATC bandwidth.

30. The method of claim 29, wherein each content stream portion comprises a time extent of respective content, said respective content being divided into a plurality of time extents.